What is claimed is:

1. A precision Multi-dimensional capacitive transducer comprising:

a pickup plate;

a plurality of drive plates disposed on opposing sides of said pickup plate,

means for supporting said drive plates, each of said drive plates being composed of an electrically conductive material;

a plurality of support springs engaging and supporting said center electrode, said support springs comprising planar springs.

2. The capacitive transducer of Claim 1 wherein said drive plates comprise four plates.

3. The capacitive transducer of Claim 2 wherein said support springs comprise four planar springs.

4. The capacitive transducer of claim 3 wherein electrode comprises a planar electrode and said support springs lie on the same plane as said center electrode.

5. A precision Multi-dimensional capacitive transducer comprising:

a lower drive plate electrode assembly, said lower assembly including a plurality

of drive plates, said drive plates being composed of electrically conductive material;

an upper drive plate electrode assembly, said upper assembly including a plurality of drive plates, said drive plates being composed of electrically conductive material;

a center electrode;

said lower drive plate electrode assembly and said a upper drive plate electrode assembly being disposed on opposing sides of said center electrode;

a plurality of support springs engaging and supporting said center electrode, said support springs comprising planar springs.

6. The capacitive transducer of Claim 5 wherein said drive plates comprise four plates.

7. The capacitive transducer of Claim 5 wherein said support springs comprise four planar springs.

8. The capacitive transducer of claim 5 wherein said center electrode comprises a planar electrode and said ~~support~~ planar support springs lie on the same plane as said center electrode.

9. The capacitive transducer of Claim 8 wherein said electrode comprises metal foil.

10. The capacitive transducer of Claim 9 wherein said foil electrode comprises high strength beryllium copper alloy.

11. The capacitive transducer of Claim 10 wherein said foil electrode and said support springs are formed from a single sheet of foil.

12. The capacitive transducer of Claim 10 wherein said foil electrode and said support springs are formed from a single sheet of foil by photochemical etching.

13. The capacitive transducer of Claim 11 wherein said drive plates comprise an electroconductive material disposed on an aluminum oxide substrate.

14. The capacitive transducer of Claim 13 wherein said electroconductive material comprises pure copper.

15. The capacitive transducer of Claim 13 wherein said center electrode comprises a material having a thermal expansion coefficient similar to aluminum oxide.

16. The capacitive transducer of Claim 15 wherein said center electrode material is molybdenum.

17. The capacitive transducer of Claim 9 wherein said transducer includes first spacer means disposed between said lower drive plate and said electrode and a second spacer means disposed between said upper drive plate and said electrode.

18. The capacitive transducer of claim 17 wherein said electrode comprises copper foil having a thickness in the range of 0.0005 and 0.005 inches.

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